Title (en)

METHOD FOR PRODUCING Al-Mg-Si BASED ALUMINUM ALLOY PLATE EXCELLENT IN BAKE-HARDENABILITY

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER AUF AL-MG-SI BASIERENDEN ALUMINIUMLEGIERUNGSPLATTE MIT HERVORRAGENDER BAKE-HARDENABILITY

Title (fr)

PROCEDE DE PRODUCTION DE PLAQUES D'ALLIAGE D'AL-MG-SI PRESENTANT UNE EXCELLENTE CAPACITE DE DURCISSEMENT THERMIQUE

Publication

EP 1715067 A1 20061025 (EN)

Application

EP 04807567 A 20041222

Priority

- JP 2004019210 W 20041222
- JP 2003432073 A 20031226

Abstract (en)

Summary [Objectives] Strengthening, cost reduction, and improvement of press formability and bake hardenability of aluminum alloy sheets. [Means for achieving objectives] A manufacturing method for Al-Mg-Si aluminum alloy sheet with excellent bake hardenability, characterized by twin belt casting a molten Al-Mg-Si aluminum alloy containing Mg: 0.3 - 1.0 wt%, Si: 0.3 - 1.5 wt%, Cu: 1.0 wt% or below (including 0%), and Fe: 1.2 wt% or below (including 0%), and containing Mn: 0.1 - 0.7 wt% and/or Cr: 0.1 - 0.3% according to need, and the remnant being Al at an average cooling rate of 20 degrees C or above, and at that time, making the temperature of the ingot as it comes out of the casting machine 250 degrees C or below, and then rolling to the final sheet thickness by cold rolling only and without homogenization or hot rolling, and solution treatment being done in a continuous annealing furnace.

IPC 8 full level

C22C 1/05 (2006.01); **B22D 11/00** (2006.01); **B22D 11/06** (2006.01); **B22D 11/12** (2006.01); **B22D 11/22** (2006.01); **C22C 21/02** (2006.01); **C22C 21/06** (2006.01); **C22C 21/08** (2006.01); **C22F 1/05** (2006.01); B21B 3/00 (2006.01)

CPC (source: EP KR US)

B22D 11/003 (2013.01 - EP US); **B22D 11/0605** (2013.01 - EP US); **B22D 11/22** (2013.01 - EP US); **C22C 1/05** (2013.01 - KR); **C22C 21/08** (2013.01 - EP KR US); **C22F 1/05** (2013.01 - EP US); B21B 2003/001 (2013.01 - EP US)

Cited by

EP2489755A4; DE102008008326A1; EP2822717A4; US2011265606A1; US9096915B2; EP2822716A4; WO2008078399A1; EP2553131B1

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